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Field, J. M., Fotheringham, D., Subramony, M., Gustafsson, A., Ostrom, A. L., Lemon, K. N., Huang, M.-H., & McColl-Kennedy, J. R. (2021). Service Research Priorities: Designing Sustainable Service Ecosystems. *Journal of Service Research*, 24(4), 462–479. <https://doi.org/10.1177/10946705211031302>

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Service Research Priorities: Designing Sustainable Service Ecosystems

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Keywords: service research priorities; stakeholders; transformative service research; service ecosystems, platforms, disadvantaged consumers and communities; machine learning

Acknowledgments: The authors would like to thank Research Assistants Olivia Eveslage, Julianna Glafkides, Katie Hamlin, Bryan Howard, Kelley Morin and, Jamison Sheffer for of their extraordinary efforts on this research project. We would also like to thank all those individuals, from around the world, who participated in the research

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Service Research Priorities: Designing Sustainable Service Ecosystems

Executive Summary

This article identifies research priorities to expand the boundaries of service research beyond service encounters (i.e., employee-customer, organization-customer) to include the interrelationships among multiple stakeholders, including, organizations, platforms, societies, and the environment. Through this expansion, we hope to enrich scholarship related to the mechanisms, contexts, and boundary conditions of important service interactions and relationships. For instance, expanded topics might include understanding institutional mechanisms such as government policy that influence data-privacy (e.g., trade-off between frictionlessness and control over one's own data), and examining variability in telecommunication infrastructure to reconcile discrepancies in online service delivery.

We view service through a service-ecosystems lens which allows us to gain a systemic understanding of value creation grounded in the socioeconomic context, and focus on the institutional mechanisms that govern service exchange. Further, we emphasize the importance of utilizing a transformative service research (TSR) perspective to solve critical issues of human concern, including sustainability, inclusiveness, access, and justice, and helps shape a more socially aware and responsible discipline. These two complementary lenses—service ecosystems and TSR—undergird the service research priorities (SRPs) discussed in this article.

Similar to the companion article (Ostrom et al, 2021), we utilized a multi-method, multi-stakeholder, and global approach to unveil important long-term challenges that cross disciplinary boundaries and are in urgent need of future research and solution. For example, we found that the seventeen UN Sustainable Development Goals were salient among both scholars and practitioners, who emphasized the importance of eliminating poverty, ensuring equity and

dignity, building peaceful and inclusive societies, and protecting the planet to support future generations. Not surprisingly, the resulting research priorities that emerged from this analysis focus on *designing sustainable service ecosystems*. These priorities reflect the dual lenses of complex service ecosystems and transformative service research and potentially represent the future frontier of service research.

We focus on three research priorities in this paper: SRP5: large-scale and complex service ecosystems for transformative impact, SRP6: platform ecosystems and marketplaces, and SRP7: services for disadvantaged consumers and communities. Together, these priorities highlight the importance of designing responsive and resilient ecosystems, innovative and responsible platforms, and deliver services that enhance the well-being of disadvantaged consumers and communities. We call out the importance of engaged scholarship that measures impact in terms of how well we understand and solve critical societal issues, rather than metrics such as article citations and h-indices. To this end, we provide scholars with the necessary tools to engage in problem-centered research with members of other disciplines (e.g., public policy, health sciences). Throughout the article, we emphasize the importance of big solutions and innovative thinking to tackle current and emerging service problems, and identify the need for thoughtful and evidence-based policy development and implementation. We see the need for service scholars to engage with policymakers to help build the sustainable and just ecosystems that motivated these priorities; and hope to ignite scholarship that contributes to the development of sustainable service ecosystems.

Service Research Priorities: Designing Sustainable Service Ecosystems

ABSTRACT

This article utilizes input from service scholars, practitioners, reviews of published literature, and influential policy documents to identify service research priorities that push the boundaries of extant research. In a companion piece (Ostrom et al. 2021), we focused on four service research priorities related to managing and delivering service in turbulent times. Further, we identified a set of stakeholder-wants from the literature and included research questions that tie key stakeholder-wants to each of the three priorities in this article and the four priorities in the companion article. Here, we highlight the critical importance of scholarship and practice related to the design of sustainable service ecosystems and discuss three key service research priorities: large-scale and complex service ecosystems for transformative impact (SRP5), platform ecosystems and marketplaces (SRP6), and services for disadvantaged consumers and communities (SRP7). We call for an engaged service scholarship that considers the interrelationships among consumers, organizations, employees, platforms, and societal institutions and pursues transformative goals.

Service pervades nearly all domains of human activity. Yet, scholarship focusing on the interrelationships among the actors involved in the service process (organizations, customers, workers) and the institutions or “rules of the game” that shape these relationships is relatively recent (Vargo and Lusch 2016). Viewing service through this service-ecosystems lens allows us to gain a systemic understanding of value creation grounded in the socioeconomic context (as opposed to a relatively narrow focus on service encounters). This lens also allows us to focus on the institutional mechanisms (i.e., regulative, normative, and cultural) that govern service exchange (Scott 2001). In addition, there is increasing awareness regarding the “social dimension of value creation that generates uplifting change for greater well-being among individuals and collectives” (Blocker and Barrios 2015, 265). This transformative service research (TSR) lens allows scholars and practitioners alike to focus on critical issues of human concern, including sustainability, inclusiveness, access, and justice, and helps shape a more socially aware and responsible discipline. These two complementary lenses—service ecosystems and TSR—undergird the service research priorities (SRPs) discussed in this article.

As described in our companion article (Ostrom et al. 2021), we identified a total of seven service research priorities and their concomitant research questions by triangulating inputs from: (a) the analysis of global service trends, (b) a systematic review of review articles published between 2016 and 2020, (c) survey data from scholars and practitioners, and (d) roundtables held at the world’s premier service research centers. The focus of the current article is on the last three SRPs that together emphasize the importance of designing sustainable ecosystems. To reiterate, our goals for these papers are threefold. First, we aim to catalyze future research by delineating key service research priorities. Second, we seek to identify key stakeholder-wants that are relevant for each SRP. Third, we endeavor to focus on under-researched topics that have the potential for high impact.

In the sections that follow, we begin by presenting a brief overview of the multiple methodologies used in identifying the priorities, along with the organizing framework of the seven service research priorities and related stakeholder-wants. We then discuss the final three priorities and several key stakeholder-wants in more detail, identifying potential research directions for each.

METHOD

As we describe in depth in our companion article (Ostrom et al. 2021) and the Web Appendix, the SRPs and stakeholder-wants were identified through a two-phase process. Phase 1 included three types of data collection: (a) a large-scale analysis of global service trends utilizing unsupervised machine learning and natural language processing, (b) a global survey of business practitioners and service scholars asking them to identify the most critical service issues in need of additional insight and solutions, and (c) a review of recent service journal articles discussing research priorities to identify potential stakeholder-wants that could guide future research. Insights from the first two approaches were used to develop the service research themes using an iterative approach. We examined key topics emerging from the machine learning analysis of Phase 1 global service trends and primary data from the Phase 1 survey as input for identifying and finalizing the research priorities through analysis of the Phase 2 survey and roundtables.

Global in Scope. A key goal guiding our research was to have the research priorities be global in scope and to attempt to identify complex problems requiring inter- or transdisciplinary approaches. Thus, in the global trends analysis of Phase 1, we utilized web scraping to identify documents related to service trends. We specified the scraping of the documents to include both titles and contents and limited ourselves to PDFs published in English within the two years before data collection.¹ Both single- and multi-word keywords were used. Keywords were identified through multiple experiments before web scraping to identify the optimal set of keywords. Thus, we maximized the set of relevant documents for our purposes. The results of the experiments identified the following keywords: “global,” “trend,” “issue,” “service,” “technology,” “AI,” “global trend,” “global issue,” “service trend,” “machine learning,” “artificial intelligence,” “global service trend,” “global technology trend,” and “global

¹ We limited potential documents in this way (PDF, English only) for two reasons. First, many non-PDF online documents are reviews, comments, blogs, and brief reports that are not suitable for our purposes. Second, we scraped the documents globally, but given that the topic modeling and sentiment analysis all hinged on a specific language, we limited the documents to English as the dominant language for such reports.

technology and service trend.” These keywords enabled us to capture potentially complex issues. The final database was comprised of 837 PDF documents that were then analyzed using unsupervised machine learning. For details of the analysis, please see the Web Appendix.

The topics that emerged from the global trends analysis provided the initial spark for the significant service ecosystem challenges that are incorporated in this article. Key topics emerging from this initial phase of the research included, for example, the future of capitalism, digital service innovation from customers, the impact of global warming and climate change on service, service under global conflict, and creating sustainable models for health care (see Web Appendix A, Table 2). These complex issues and many others that were identified through the global trends analysis then fed into the Phase 1 survey data and, subsequently, into the Phase 2 roundtables and surveys (for details, see Ostrom et al. 2021).

Inclusive of Multiple Stakeholders. Another significant goal of our research was to make sure that the research priorities reflected and incorporated issues faced by multiple stakeholders, including organizations, consumers, society, governments, marginalized populations, and the environment. We conducted an in-depth review of service research (see Ostrom et al. 2021) and developed a list of stakeholder-wants identified in prior research but that we felt might benefit from additional insights. In Phase 2 of the research, respondents were asked to identify the most critical stakeholder-wants. These were subsequently coded according to their relevance to each of the resulting priorities.

Resulting in Big-Picture Priorities. After completion of data collection, we identified the final SRPs by combining themes with overlapping issues and questions posed. For each priority, the research team identified a set of sub-themes gleaned from the data. These were issues raised repeatedly and judged to be under-researched. Note that sub-themes are not intended to be exhaustive within an SRP. Rather the research team considers them to represent high-impact research opportunities. We identified these research opportunities as follows. From the machine learning and qualitative analyses of the Phase 1 responses and the theme-specific responses in Phase 2, the research team identified potential questions associated with each SRP. To determine top stakeholder-wants for each SRP and generate questions at the

intersection of SRPs and stakeholder-wants, we coded stakeholder-want responses in Phase 2 according to their relevance to each SRP. Questions related to stakeholder-wants for each SRP are included as appropriate.

This multi-method, broad-scope, global approach helped us discover important long-term challenges that cross disciplinary boundaries and are in urgent need of future research. Further, combining significant global and societal issues with enduring stakeholder-wants helped us uncover a set of far-reaching problems that will require major effort and investment to solve. The resulting research priorities, detailed below, emerged from this analysis. They reflect the dual lenses of complex service ecosystems and transformative service research and potentially represent the future frontier of service research.

SERVICE RESEARCH PRIORITIES

Using the approach described above, we identified seven service research priorities and organized them into three pillars: *designing sustainable service ecosystems*, *leveraging technology for service provision and consumption*, and *responding to the changing needs of multiple stakeholders*. The three SRPs in the *designing sustainable service ecosystems* pillar discussed here (numbered 5-7, continuing from the companion article) are (5) large-scale and complex service ecosystems for transformative impact, (6) platform ecosystems and marketplaces, and (7) services for disadvantaged consumers and communities. The SRPs in the *leveraging technology for service provision and consumption* pillar (i.e., technology and the changing nature of work, and technology and the customer experience) and the *responding to the changing needs of multiple stakeholders* pillar (i.e., resource and capability constraints, and customer proactivity for well-being) are discussed in the companion article. The SRPs and their pillars sit on a base of stakeholder-wants that inform specific research questions. Although the complete framework is shown in Figure 1, the content included in the companion article is grayed out. In this section, we describe SRPs 5-7 and sub-themes within each SRP, linking these with key stakeholder-wants

and proposing questions to instruct future scholarship. A summary of the SRPs and research questions appears in Table 1.

[Insert Figure 1 about here]

Designing Sustainable Service Ecosystems

Service Research Priority #5: Large-scale and Complex Service Ecosystems for Transformative

Impact

A service ecosystem can be viewed as “a relatively self-contained, self-adjusting system of resource-integrating actors connected by shared institutional arrangements and mutual value creation through service exchange” (Vargo and Lusch 2016, 10–11) that can exist at different levels of analyses and conceptualization—i.e., micro, meso, macro, and meta/mega (Chandler and Vargo 2011). An emerging concern for the well-being of individuals and collectives by both scholars and practitioners has helped spark transformative service research, which emphasizes the deep and complex interrelationships among entities in the macro-ecosystem to generate transformative (not just habitual or commercial) value (Anderson et al. 2013; Anderson and Ostrom 2015; Blocker and Barrios 2015; Frow et al. 2019).

Consistent with this perspective, analyses of our Phase 1 data revealed a need for research to examine the impact of global service ecosystems on human and planet welfare. Further, several significant aspects relating to this overarching priority emerged after analyzing Phase 2 data. Thus, we combined the following three themes from Phase 1 due to significant overlap between them: (a) designing and orchestrating large-scale, complex, and challenging service ecosystems for transformative impact on society and the planet; (b) the impact of climate change on service and the role of service in reducing or exacerbating climate change; and (c) service under global conflict and crisis. In both Phases 1 and 2, several respondents mentioned the need for service research tied to the UN Sustainable Development Goals (“The 17 Goals | Sustainable Development” 2018) that relate to this priority. These 17 goals focus on eliminating poverty and achieving equality, dignity, and prosperity for all people while fostering just,

peaceful, and inclusive societies and protecting the planet so that it can continue to support future generations.

Building upon efforts in the service discipline to engage in research that has a transformative effect on people and society more broadly, we believe there remains scope for contributing to the Decade of Action emphasized in the UN's *The Sustainable Development Report (2020)*. While addressing each of the goals involves large-scale and complex service ecosystems, we specifically call out for research on two sub-themes repeatedly mentioned in our data that relate to two of the UN goals: building resilient infrastructure and society (UN Goal 9) and sustainable consumption (UN Goal 12). A third sub-theme that emerged from the data relates to establishing efficient and effective public/government services. These services, such as voting, education, and health care (e.g., vaccine development and distribution), have widespread collective impact yet are often perceived to be inefficient and ineffective. The most frequently mentioned Phase 2 stakeholder-wants relevant to this priority include resiliency, agility, and simplicity. Resiliency is embedded in the first sub-theme; we include a separate sub-theme focused on agility and simplicity to consider the seemingly paradoxical needs for both agility and simplicity in complex service ecosystems. We now discuss each of the sub-themes and stakeholder-wants in more depth and identify critical areas for future research for each.

Building resilient infrastructure and society. In this section, we consider the term “infrastructure” to include both physical infrastructure (e.g., roads and wireless networks) and the institutional mechanisms (e.g., regulations and procedures) that enable services to function. More broadly, we highlight the importance of considering societal resilience and the role that service systems play in facilitating or inhibiting such resilience. During turbulent times, infrastructure and the services that it enables must demonstrate resilience to cope with unexpected and extreme occurrences. Resilience refers to persistence, adaptability, and transformability under conditions of change and stress (Folke et al. 2010). Psychological theories of resilience suggest that adaptation to changing circumstances requires the building of qualities within individuals, including positive engagement, meaning, and relationships (Seligman 2000). At the

systems level, resilience is translated into a commonly shared understanding of positive end-states, well-being, and social connections.

Bolton (2018), referring to recent global challenges such as the financial crisis of 2008 and the European refugee crisis, emphasizes the "need for scholarly knowledge to help design *flexible* and *robust* [i.e., resilient] service networks that also produce favorable outcomes for all participants and their communities" (Bolton 2018, 282). Furthermore, the COVID-19 pandemic has made interconnections among economic, social, and environmental systems salient (Schwab 2021), highlighting the need for a more holistic and global multi-stakeholder perspective to examining questions related to building resilient infrastructures, platforms, and society (Floetgen et al. 2021). Service research could integrate and contribute to emerging economic concepts such as stakeholder capitalism. In such a system, decision making reflects the interests of all those with a stake in the economy, and metrics are optimized not only for short-term financial profit but also for "the health and wealth of societies overall, as well as that of the planet and that of future generations" (Schwab 2021, 173). This direction may require developing new frameworks and applying theories such as a theory of paradox (Ozanne et al. 2016; Smith and Lewis 2011) to update and broaden the existing, primarily shareholder value-driven metrics to measure the resilience of service systems.

As an example, many critical infrastructure centers (e.g., data, manufacturing, and pharmaceuticals) require temperature-controlled environments (Webb 2020). However, as a result of global climate change, the weather has become more extreme and harder to predict, and severe events such as wildfires have become more prevalent. This can significantly stress physical infrastructures, making it more difficult to maintain consistency within them. The issue extends to the supply chain as well, especially for food and medical supplies. Future research should address the following questions related to this subtheme: How can critical infrastructure processes and systems (e.g., data centers, telecommunications systems, and supply chains) be designed for resilience to climate change? What types of predictive models can be developed to anticipate these design requirements? How can we build infrastructure that is resilient to the large societal and environmental challenges we now face and will

continue to experience in the future? How can core services (e.g., public services, health care service networks, schools, and colleges) be mobilized to build societal resilience? What metrics can be used to measure and assess resilience? How can service processes be designed to address stakeholder uncertainty and its effects (e.g., by creating emotional connections) as a way to build personal resiliency during crises? How can researchers best partner with organizations already attempting to tackle these issues? One approach to tackling such complex problems is the United Nations Development Programme's network of 60 innovation accelerator labs serving 78 countries (Altman and Nagle 2020). These accelerator labs create a network of ecosystems with other labs and local partners to disseminate solutions globally. In this regard, we also recommend research related to the (re)designing of institutional arrangements (i.e., rules, rituals, symbols) that facilitate or impede value cocreation by key actors (Vink et al. 2021).

Sustainable consumption. As the human population increases, both developed and developing societies increase their use of limited resources to survive and enjoy the comforts of modern living. However, unfettered consumption can reduce the quantity and quality of natural resources. For instance, the use of fertilizers can render groundwater undrinkable, unsustainable production and consumption of goods can pollute the air, and an increased appetite for agricultural land destroys biodiversity (e.g., 68% of mammals, birds, fish and reptiles since 1970 have been rendered extinct; (World Wildlife Fund 2020)). Scarcity of resources, in turn, can have devastating human consequences such as wars, mass migration, climate change, and widespread scarcity of food and water (Fahey et al. 2017). With a growing population that uses up more of the natural habitat that would otherwise be occupied by wildlife, we are likely to see more frequent outbreaks of pandemics as many wildlife species are reservoirs for pathogens (Daszak, Cunningham and Hyatt 2000).

While the goal of sustainable consumption is clearly relevant to the manufacturing and agriculture sectors, it also needs to be an important consideration for service ecosystems, for example, in the hospitality and travel industries. Although scholars engaged in Responsible Research for Business and

Management (RRBM; www.rrbm.network), as well as those studying sustainability in the (social) marketing and operations management literatures (Bolton 2020; Field et al. 2018; Zainuddin and Gordon 2020; Zeithaml et al. 2020), are making progress in this area, understanding how the efforts of participants in service ecosystems can be orchestrated to significantly reduce resource consumption constitutes a key challenge.

As service scholars, we are called upon to identify other ways in which service systems can assist communities and societies in becoming more resilient and sustainable. Key issues to be addressed include the following: How can service systems be (re)designed to reduce pollution and exploitation of natural resources? How can technology be leveraged to enable sustainable consumption? How can the government and public sector policies and processes be designed and implemented to promote sustainable practices? How can the private sector and social entrepreneurs be encouraged or incentivized to invest in building sustainable and resilient service systems? Given that a small percentage of the world population consumes a very high proportion of the world's resources, what insights can service researchers bring to bear to create sustainable, if not more equitable, consumption of limited global resources?

Establishing efficient and effective public/government services. The previous two sub-themes substantively involve the public sector (including non-government organizations, or NGOs) as part of the service ecosystem. In this section, we focus more specifically on the issue of how to improve the efficiency and effectiveness of public/government services. For example, during the 2020 U.S. election, concerns were raised about potential fraud in the voting process. Research is needed on how to manage such perceptions and ensure the reality of election integrity. Technologies such as blockchain have been suggested to manage the election process and safeguard the integrity of voting systems (Kshetri and Voas 2018).

Three recent articles offer several directions for future research. The first, Hodgkinson et al. (2017), integrated the public management and service management literatures to present a public service network framework capturing how value is created in public service ecosystems using a service-dominant

approach. Focusing on the “service” aspect of public services, the authors offered research directions where service management theory can contribute, in part, to improve the efficiency and effectiveness of these services. The second, Trishler and Westman Trischler (2021), took a similar approach, while focusing specifically on how the digitization of public services facilitates value co-creation in public services. Further research questions that emerged from our data include: How can technology enable the delivery of public services fairly and respectfully? What is the role of public services in building or, alternatively, reducing social cohesion? Buell et al. (2021) find that operational transparency can help answer these questions; they show that trust and engagement with the government increases when citizens can see the often-hidden work being done in response to their public service requests.

The third recent article (Finsterwalder and Kuppelwieser 2020) offers a resources-challenges equilibrium framework for service system well-being informed by the COVID-19 pandemic. The authors propose several research questions covering the pre-incident, incident, and post-incident phases of a public crisis that require public-private partnerships. To those mentioned in this article we add the following: Under what circumstances are public-private service partnerships an appropriate organizational form during planned (e.g., health care delivery) or unplanned (e.g., pandemic responses) large-scale initiatives? If appropriate, how can such public-private partnerships be structured and implemented to improve both process and outcome efficacy? As an example, consider the speed of COVID-19 vaccine development versus the slower-than-anticipated rollout of vaccinations globally. In the U.S., for instance, the entire process involved public-private partnerships and large-scale, complex service ecosystems. These partnerships accelerated development, but the subsequent rollout suffered from significant logistical challenges from distribution to the states and coordination of federal and state efforts to promote inoculations.

Complex service ecosystems: agility and simplicity. Agility and simplicity, two of the stakeholder-wants most mentioned for this SRP, have very different implications for the design and management of complex service ecosystems. Agility concerns sensing and responding to new situations in a timely fashion

(Kryvinska 2012), thereby embracing complexity, while simplicity seeks to reduce—or at least reduce the perception of—complexity. We view the paradox of at once embracing and reducing complexity as offering ample and potentially impactful opportunities for designing the types of ecosystems that are the subject of this SRP.

Agility, in particular, is critical during crises affecting individuals and system ecosystems (Sodhi and Tang 2021). For instance, humans are affected by economic loss and poverty (Ifanti et al. 2013), limited access to health care for life-threatening diseases such as cancer (McColl-Kennedy, Cheung and Coote 2020) and vaccines (Ifanti et al. 2013), severe emotional stress such as the long-term ill-being of Hurricane Katrina survivors (Elliott and Pais 2006), and insecurity of life and livelihood (e.g., Miura, Miura, and Okayasu 2018). Further, natural and human-created disasters such as Hurricane Katrina (Elliott and Pais 2006; Petterson et al. 2006), 9/11 (Adams and Boscarino 2005), infectious diseases (Fauci, Touchette and Folkers 2005; Finsterwalder and Kuppelwieser 2020), Fukushima and Chernobyl (Morris-Suzuki 2014), the global financial crisis of 2007-2008 (Helleiner 2011), and the eruption of Eyjafjalla in 2010 (Budd et al. 2011) can have life-altering and -threatening consequences for individuals and long-lasting disruptive effects on societies, markets, and organizations.

Given the frequent and large-scale effects of disruption, our service ecosystems require agile capabilities. While research conducted at the organizational level of analysis connects agility to market orientation and strategic flexibility (Grewal and Tansuhaj 2001), there is a need to view this capability at the level of ecosystems. Organizations and societies tend to favor static processes, but institutions often resist flexibility. Yet, ecosystems are always changing under the influence of inevitable tensions and conflicts. Embedding agility into ecosystems, therefore, is fraught with difficulties (see Vargo, Akaka and Wieland 2020).

Survey respondents also highlighted simplicity as a stakeholder-want to be considered alongside agility in complex ecosystems. For example, several Phase 2 respondents asked whether or how these large-scale and complex services can be simplified and, therefore, have fewer potential failure points, making it easier for the customer to successfully engage with them. Prior research has found that

simplicity can lead to increased compliance, especially in health care (Erhardt 1999), and a better customer experience (Lemon and Verhoef 2016).

Building on the issues identified above, we recommend that service scholars address the following questions: How can service ecosystems be built in agile ways to withstand or recover from unexpected crises? How can ecosystems develop agility? How should institutions be reshaped to allow agility to manifest within ecosystems? Can agility be developed without compromising social cohesion and stability? How can stakeholder creativity be harnessed to make service processes more agile? How can complex service systems be designed, managed, and communicated to key stakeholders to increase the simplicity of engaging with such systems? Can simplicity be “designed in”? Do agility and simplicity complement one another or does an increase in one necessitate a decrease in the other?

In summary, this research priority focuses on improving large-scale and complex service ecosystems for transformative impact. Within this priority, we focused on four sub-themes, each requiring and calling for significant research: building resilient infrastructure and society, sustainable consumption, establishing efficient and effective government/public services, and a sub-theme centered on agility and simplicity stakeholder-wants. We hope that future research on these sub-themes and the three stakeholder-wants embedded in this priority—resiliency, agility, and simplicity—has the potential to result in transformative solutions for our world.

Service Research Priority #6: Platform Ecosystems and Marketplaces

It has been estimated that 30% of global economic activity could be mediated by digital platforms by 2025 (Schenker 2019), leading to the emergence of platform businesses that “provide a governance structure and a set of standards and protocols that facilitate interactions at scale so that network effects can be unleashed” (Hemans 2020). Several platform classifications have been put forward, including those based on the activities of the platform, such as resource sharing, matching, crowdsourcing, reviews, crowdfunding, development, and communications (Chen et al. 2020; Field et al. 2018; Wirtz et al. 2019), or those based on purposes, such as aggregation platforms (e.g., Airbnb), social platforms (e.g., Twitter),

mobilization platforms (e.g., Linux), and learning platforms (e.g., ccMixter) (Hemans 2020). Here, we discuss two key platform types—exchange-based and market-based (Eckhardt et al. 2019)—to generate potential research questions. Within the market-based platform category, social media has some unique characteristics (e.g., the purpose of social media like Facebook is to bring people together while making its money on the marketing of business/products) that warrant separate discussion as part of a dedicated research agenda.

The logic of exchange-based platforms—also referred to as the sharing economy, peer-to-peer economy, and access-based economy—is that they connect individuals and provide temporary access to resources unused by the owner (e.g., cars, housing, clothing, tools, money, or even expertise such as safety or installing equipment). This platform type can democratize industries as it connects individual actors to generate revenue without the exchange of resource ownership. It also has other potential benefits, including creating a more sustainable consumption pattern, giving access to affordable resources, and increasing flexibility of work hours and wages. On the downside, this model can be compromised by fraud and even abuse of rented property (Hazée, Delcourt and Van Vaerenbergh 2017; Schaefers et al. 2016), as well as systematic bias or discrimination in allowing access (King 2016). In contrast, market platforms (e.g., Apple, Amazon, Alibaba, Wish, foodora, and Uber) enable firms to access large markets (consumer, financial, and labor) through technology. The competitive advantage of this type of platform is the convenient and affordable matching of buyers and sellers. For example, Upwork and Amazon Mechanical Turk match people demanding and those supplying work in the form of microtasks or complete projects. These platforms have the potential to shift the competitive situation in any market (Reinartz, Wiegand and Imschloss 2019). Finally, social media companies such as Google, Facebook, or Twitter offer other forms of market-based platforms that provide a forum for information exchange and consumption while acquiring revenue by selling access to customers (and their information) to other companies.

Consistent with the numerous comments by scholars and practitioners in Phase 1, we propose that the emergence of platform-based businesses presents multiple opportunities for service scholarship and

practice. We organize these opportunities below by exchange-based, market-based, and social media platforms, followed by a dedicated discussion of ethical issues. In Phase 2, the two stakeholder-wants most frequently associated with platforms were trust and transformation, which generated several research questions. For example, how can platform designers not only engender trust in the platform by acting as a “trusted intermediary” but also create a sense of shared purpose and trust among the platform participants? How are consumer expectations and behaviors transformed through the use of platforms and what are the implications for both platform-based and non-platform-based services?

Exchange-based platforms. Exchange-based platforms consist of peers offering similar services (e.g., a car ride, temporary housing, and lending money). One of the main difficulties with this type of platform is that buyers (and sellers) often have limited access to information, for instance, for quality evaluation (Caldieraro et al. 2018). Given that these are often transaction-based relationships, the provider also tends to have limited information about the buyer. Natural research questions, then, are: What are some ways in which customers can discern the potential quality of the promised service? How are signals sent by service providers without access to a corporate brand? How does the provider know they can trust the buyer with a potentially valuable asset (e.g., a home or money)? What roles do platforms perform in efficiently and accurately matching providers and customers? How do biases get created within these platforms and how can these be mitigated? The use of heuristics to interpret the quality of service and minimize risk can lead customers to gravitate toward distinct seller characteristics (Jaeger et al. 2019), setting up the context for discrimination based on minority status, sexual orientation, and religion (King 2016). There is a need for research in these domains.

Market-based platforms. With market-based platforms, one key issue is that of monopoly. For instance, Apple has a monopoly on the type of apps that they allow on a phone, Google has a search monopoly such that information not found using this search engine can be considered, in effect, non-existent, and Amazon or Alibaba have a monopoly on customers’ time and effort by serving as one-stop shops for a

large number of seemingly unrelated products. Finally, companies such as Uber also have direct access to customers and interact with them, even at a global level, in ways that locally based taxi companies could not (Breidbach and Brodie 2017). While such control can benefit customers by providing convenience and access; these platforms can have an unfair advantage over conventional brick-and-mortar service providers and specialized businesses. These platforms also tend to break competition norms, creating a potential backlash, as when platforms such as Uber and Airbnb are banned or allowed to operate only in a limited capacity (Neubauer 2019; Thomson and Lanxon 2019). Many problems are worth researching in this sub-theme. These include: How can firms compete with a major market platform that has the potential to form a monopoly? How do these platforms affect societies, customers, and employees? What leads customers to avoid patronizing these platforms? Will the emerging markets driven by platforms develop their own institutional norms, and if so, how?

Social media platforms. While social media platforms can help users form a community and enable sharing of information and support (Zuckerberg 2017), they are also replete with problems, including overuse or addiction, the emergence of fake information and echo chambers, and data insecurity. Users can become addicted to the recognition brought about by posting on social media, asking themselves, “If it happens and you don’t post it on Facebook, did it really happen?” (Hess 2011). Users also tend to trust information created by other users without being able to discriminate between genuine and fake news and choose to interact only with people and information that confirm (or exaggerate) their biases, either by choice or through underlying algorithms. However, they can also have substantial benefits such as finding lost property, pets, people, and otherwise-unavailable information, and coordinating the efforts of communities in times of conflict and crisis (Skålén et al. 2015). There is ample room for research in this area, including: How do users determine the boundaries between private and public information? What can be done to limit the information that can be shared or sold? How can social media be used to create

opportunities for bridging socio-cultural divides as opposed to exacerbating them? How do users balance isolation from others with engagement only with similar others?

Another growing business model on social media platforms is influencer marketing or peer-to-peer marketing. An influencer is defined as someone who posts to social media in exchange for compensation (Campbell and Grimm 2019). The goal of the influencer is to build up a large audience of followers, who have opted in to read the influencer's social media content, as a large audience implies a large reach. The influencer creates content that blends a mix of advertisement and the influencer's own environment similar to advertorials or infomercials (Campbell and Farrell 2020). The followers are not always aware that the influencers have their own agenda and that they promote products or services as a part of their job. There is a growing research stream on this that is of likely interest to service researchers. For example, influencers have the potential to affect customers' well-being by shaping their choices in several areas (e.g., food, life choices, and exercise). However, given that they often act on behalf of a company, who is responsible for the consequences of the influencer's recommendations? How do influencers and early adopters in peer-to-peer marketing manage the structure and culture of the consumption group created on social media?

Ethical issues. We also argue for a broader debate on the ethical and human implications of platforms for our society. As these platform-based businesses are technology-operated and they all to some degree run on the notion of a matchmaking process (Wei and Lin 2017), we rely on receiving customized offerings that fit our needs without too much effort and at the right time. However, we also invite these platforms into our lives and trust them with information that we would reveal to few others. The intention of suppliers is to use this information to proactively predict customer behavior and ensure that customers receive the best possible service offering. But how much intrusion will we accept from platforms in terms of how personal information is used? Is there also a limit in terms of the number of suppliers from which we would want to have customized offerings and how (or can) we choose these suppliers? Further, as these platforms take over a larger role in coordinating work, we are intrigued by the questions of

autonomy and volition. Platforms have replaced Max Weber’s “iron cage” of hierarchy and specialization with a “fishbowl” in which the actions of humans are constantly monitored and controlled by algorithms. Are we trading in autonomy for the convenience of matching? Further, the lack of “employee” status for service providers (e.g., Uber drivers and Upwork freelancers) is leading to the commoditization of labor and discounting of long-term loyalty. These problems are sure to have implications on how we work and are compensated. We urge an interdisciplinary effort to investigate and solve these problems.

The opportunities for research on platform-based businesses are vast. In this priority, we first looked at exchange-based platforms, noting that significant research is needed regarding information asymmetry, signals, trust, biases, and heuristics. Second, we considered market-based platforms, identifying key research issues related to monopolistic behavior, competition, control, and implications for customers. Third, we identified research needed regarding social media platforms, focusing on boundaries, information trust, data sharing, engagement, and influence. We have also provided a set of research questions related to broader ethical issues and implications for society. Within this topic, the two stakeholder-wants of trust and transformation infused the research issues identified.

Service Research Priority #7: Services for Disadvantaged Consumers and Communities

Historically, service research has tended to focus on Western, educated, industrialized, rich, and democratic (WEIRD) societies (Jones 2010) that draw an estimated 96% of social science research study participants while only constituting 12% of the world’s population (Arnett 2008). However, new developments in scholarship (e.g., transformative service research, see Anderson et al. (2013)), are increasingly emphasizing the investigation of “the economically disadvantaged, racial and ethnic minorities, the uninsured, low-income children, the elderly, the homeless, . . . those with chronic health conditions, including severe mental illness . . . [and those] who often encounter barriers to accessing [essential] services” (*Vulnerable Populations: Who Are They?* 2006, 348). Further, several initiatives are gaining momentum in bringing focus to this type of research, such as RRBM, the Race in the Marketplace (RIM) Research Network, and ServCollab (Serving Humanity Through Collaboration). RIM is a newly

formed international network of scholars aimed at developing and disseminating transdisciplinary research related to race in the marketplace (Grier, Thomas and Johnson 2019). The purpose of ServCollab is to expand the aspirations and skills of service research teams to build collaborative service research approaches that transform human lives (Fisk et al. 2020).

Based on previous research, we know that the effects of crises, in particular, are not evenly distributed across all societies (OECD 2015). Females and younger people lose jobs to a larger extent in a crisis and, as a consequence, are at risk of losing their standing in society (Ammerman and Groysberg 2020). The poor and elderly in many countries have limited access to services we take for granted, such as health care and welfare support (Vega 2013). The COVID-19 pandemic disproportionately affected racial and ethnic minorities (“Community, Work, and School” 2020). And the distribution of the vaccine, once available, has been skewed toward richer communities (Goodnough and Hoffman 2021). It is important to emphasize that while resources are not endless, equitably distributing them need not be viewed as a zero-sum endeavor. For example, a more equitable society is less prone to conflicts (Hillesund et al. 2018). Importantly, while more inclusive access benefits all (e.g., parents with strollers, bicyclists, and travelers with luggage have benefited from ADA-required wheelchair access) (Bouton 2015), limiting access for the benefit of a few ultimately hurts everyone by stymieing progress and innovation (McGhee 2021; Ukanwa and Rust 2020).

Disruptive events such as natural disasters, pandemics, and global financial crises experienced in one part of our interconnected global economy can reshape the lives of many, even those in a different part of the world. For instance, the financial crisis of 2007 and 2008 caused several financial institutions to go bankrupt, wreaking havoc on the entire financial industry. Although it started in the U.S., this crisis resulted in a global loss of 30 million jobs (World Bank 2013), destroyed the economies of Greece, Italy, and Spain, and began shaping a more exclusionary economic and political climate (Tooze 2018). Further, this crisis, as well as the economic repercussions of the COVID-19 pandemic, disproportionately affected the poor while making it clear that no one nation or person can be safe until all people and nations are safe (Chutel and Santora 2021). For instance, UNESCO reported that the COVID-19 outbreak has

deprived 1.4 billion children in an already difficult situation of free daily meals and barred access to education and health care for these children (Garcia and Weiss 2020). The disparity in the rollout of the vaccine, in which high-income countries secured the majority of high-efficacy vaccines by Pfizer and Moderna, has raised alarm as emerging variants evolve to potentially evade an immune response, thus putting everyone at risk (Molteni 2021; Paton 2021).

Recent research has added a service lens to the extant public policy literature on disadvantaged populations, such as research on consumers in low-access subsistence marketplaces (Viswanathan et al. 2021), consumers experiencing natural disasters (Cheung, McColl-Kennedy and Coote 2017), refugees (Cheung and McColl-Kennedy 2019), elderly consumers (Khaksar et al. 2017), and those in prison (Hill et al. 2015), with special issues devoted to vulnerable consumers and communities (Rosenbaum, Seger-Guttmann and Giraldo 2017; Sandberg et al. 2021). Several reviews, research agendas (e.g., Anderson et al. 2013; Boenigk et al. 2020; Bolton 2020; Fisk et al. 2016, 2018; Grier et al. 2019), and new frameworks (Boenigk et al. 2021; Poole et al. 2021) have been proposed to guide this important stream of research and bring to the forefront questions of social justice, inequalities, and inequitable treatment related to “race, gender, sexual orientation and gender identity, and intersectionality” in the marketplace (Mende and Scott 2021; Scott et al. 2011; Wiener, Ellen and Burton 2020, 373). Notably, Fisk et al. (2018) spotlighted the need to create inclusive service systems and design services so that they meet the needs of all consumers, including not just service access but also choice, fair treatment during the service experience, and services that reduce suffering and increase happiness and well-being for all. These ideas have become especially relevant as the pandemic has exposed and exacerbated existing systemic inequities (North 2020).

Two related themes emerged from the data, which we combined into this SRP: (a) issues and needs of vulnerable populations (e.g., base-of-the-pyramid, aging population) related to service access, inclusion, and opportunities and challenges of serving these populations and (b) creating socially just and economically sustainable service ecosystems. From the surveys and roundtables, we identified three sub-themes: Addressing inequities in service provision and outcomes, putting humans first, and promoting

financial well-being. The most cited stakeholder-wants associated with this priority are accessibility, dignity, fairness, and well-being. Below, we discuss each of the sub-themes while incorporating aspects of these stakeholder-wants.

Addressing inequities in service provision and outcomes. In a crisis, functions such as health care, food and water, and safety are necessary for short-term survival. But in the long term, we also need societal services such as schools, infrastructure, and trustworthy information. In turn, access to these services is influenced by the availability of suitable technology, capital (financial, human, and social), and opportunity for the exercise of agency (as is the case in a democratic society). Research shows that social capital and the ability to mobilize it during crisis contributes to well-being and community resilience (Cheung et al. 2017). However, structural and systemic barriers exist that prevent disadvantaged populations from accumulating and leveraging social and other types of capital (Lin 2000) while minimizing opportunities for fair and equitable access to services. We also recommend viewing lack of access as a consequence of a broken service system, leading us to ask the following questions: How can we ensure that different population groups have equitable access to services? How can inequities in service provision and outcomes be reduced fairly? How can we develop new and update existing service systems to be inclusive and culturally responsive, considering the needs and interests not only of the dominant populations but also of those disadvantaged and marginalized? What is the role of trust among disadvantaged and marginalized stakeholders in the service ecosystem for accessing, combining, and reconfiguring resources for equitable provision and outcomes? What are some ways in which access can be improved through the implementation of affordable service technologies (e.g., digital tools to connect rural sellers with buyers without brokers or intermediaries, and access to health care through handheld devices such as mobile apps)? On the other hand, how can technologies limit or undermine access? For example, online vaccination appointment systems can be difficult to use for seniors, people with limited access to the Internet, and non-English speakers (Rosen and Bray 2021). During the COVID-19

pandemic, a potentially life-saving device that measures blood oxygen levels has been shown to provide misleading readings among African-American patients at a significantly higher rate (Rabin 2020).

It is important to recognize the vast diversity of customers when working to address inequities in service provisions and outcomes. We live in a very diverse world not only in terms of demographics, psychographics, geographic locations, and (sub-)cultural diversity but also in terms of customer preferences in real time at different times of the week, day, and hour. Recent events in the U.S., Europe, Asia, and the Middle East around “Black Lives Matter” (Hernández and Mueller 2020) have highlighted the criticality of deeply understanding and adapting to customers in their lived socio-cultural experiences. Unconscious bias in the interactions between frontline service providers and customers can be observed on a regular basis. Frontline service providers pick up on visual cues such as clothing, skin color, age, and speaking style (including accent, words, and phrases). From these cues, assumptions are made regarding the customer’s ability to pay, their preferences, and how they will be treated in the interactions (Bone, Christensen and Williams 2014). Furthermore, frontline service providers may also be treated differently based on their race and subjected to discrimination by customers (Gligor, Newman and Kashmiri 2021). As AI-based technology is increasingly taking an integral role in service provision, it highlights the question of how to handle cultural and socio-economic diversity. Training of AI requires large amounts of data and is limited to the data that is easily available, which may not be representative of the existing diversity (West, Whittaker and Crawford 2019). Furthermore, even when diverse data are available, unconscious biases may be inherent in the algorithms. Recent examples suggest that the data sets on which most AI models have been trained typically come from a western mindset. For example, a new AI-powered tool to aid in facial recognition by unblurring photos at the individual pixel level is unable to process black faces properly, rendering them as white (Vincent 2020). In a society that is struggling with issues of systemic racism and inequity, how can service technology be used to support and contribute to positive change instead of perpetuating or exacerbating existing inequity?

Putting humans first. An essential aspect of humanness is to build service systems that place primacy on human life and dignity both for consumers and providers, especially those representing disadvantaged populations (e.g., racial and ethnic minorities, the elderly, people with disabilities, base-of-the pyramid, and refugees). This view is consistent with the “human capabilities” approach to measuring progress that emphasizes not only mere availability of access to resources and services in a given society but also a substantial opportunity for each individual to integrate and create value with these resources to achieve well-being (Robeyns and Byskov 2020; Sen 1997). It is clear that firms, both big and small, have a critical role in creating a more humane society by utilizing a “humanness mindset” above and beyond traditional corporate social responsibility initiatives. However, to move beyond the goodwill of individual company leaderships, it is important to develop and adopt relevant metrics that integrate the “humans first” approach. Some private-sector initiatives to integrate development metrics that optimize for more than financial goals are already underway. Such initiatives include the “Stakeholder Capitalism Metrics” proposed by The World Economic Forum’s International Business Council (Schwab 2021, 214), JUST Capital’s JUST Index that evaluates companies based on the issues that are important to the public (Cortina 2018), and the Long-Term Stock Exchange (LTSE) that enables firms to prioritize long-term sustainable practices (Garidis 2020). How can the impact of these initiatives on service outcomes be measured? Consequently, there is a need for research that evaluates, integrates, and furthers these ideas to make a difference and have a positive impact on the well-being of individuals, communities, and society at large. There are several initiatives related to responsible scholarship and practice currently underway (e.g., Fisk et al. 2020), but how do we raise even more awareness of what reasonably should be viewed as the unjust treatment of some groups in our society? How can services for disadvantaged consumers and communities be designed and accessed in a manner that maintains human dignity and fairness and reduces inequities? More broadly, how can dignity and fairness be designed into service processes for all consumers and providers?

Promoting financial well-being. At a global level, extreme poverty is expected to rise for the first time in 20 years due to the COVID-19 outbreak (Peer 2020). In the U.S., the poverty rate in 2020 is 11.7% and 14 million Americans are at risk of eviction (Beer 2020). The pandemic is also wreaking havoc in Europe, where people are asking for social and financial help for the first time (von der Brelie 2020), with those most at risk being younger and less well educated. This type of financial stress has devastating effects on people's well-being (Hojman, Miranda and Ruiz-Tagle 2016). Over the long term, it may lead to reduced health, large debts, and loss of dignity and hope. In addition, these individuals often have difficulty regaining their previous socio-economic status. One important concept that has been brought forward to empower humans to elevate themselves from poverty is financial well-being, defined as "the perception of being able to sustain current and anticipated desired living standard and financial freedom" (Brüggen et al. 2017, 229). Brüggen and associates (2017) have developed a very useful framework for financial well-being, designed to equip humans with tools to take more control in financial matters. Our research questions related to this issue include: What steps can be taken to enhance the financial well-being of vulnerable consumers and marginalized groups? How do changes in the structure of the economy (e.g., contract or gig workers) influence individuals' ability to be financially secure or influence the efficacy of programs designed to promote financial well-being? Do exploitative service practices (such as forced labor) limit the ability of consumers to experience financial well-being? Do government interventions (such as an increased minimum wage or stimulus payments) improve overall financial well-being?

Services for disadvantaged consumers and communities constitute an important research area, now more than ever during our challenging times, and we suggested three areas with abundant research opportunities. First, we identified a need for additional research to address inequalities in service provision and outcomes, focusing on issues of social capital, access, resource combinations, and trust. Second, additional research should focus on building service systems that place humans first, with emphasis on service design, the influence of services on well-being, reduction of unjust treatment, and improvements in dignity and fairness. There is a need for more research into human empowerment through financial well-being (especially of disadvantaged consumers), the influence of structural

economic changes, and potential government interventions. Key stakeholder-wants that emerged for this priority—accessibility, dignity, fairness, and well-being—informed the research questions.

[Insert Table 1 about here]

GENERAL DISCUSSION

This article and its companion (Ostrom et al. 2021) help set the priorities for future service research based on input from multiple stakeholders—service scholars, practitioners, and the online public sphere—using a multi-phase, multi-method approach. The three priorities discussed in this article—large-scale and complex service ecosystems for transformative impact (SRP5), platform ecosystems and marketplaces (SRP6), and services for disadvantaged consumers and communities (SRP7)—highlight the importance of a concerted effort to address complex and critical changes. For instance, we note the need for responsive and resilient ecosystems, innovative and responsible platforms, and service provision for disadvantaged consumers and communities.

One of the key contributions of this article is to help expand the boundaries of service research beyond service encounters (i.e., employee-customer, organization-customer) to encompass the interrelationships among multiple stakeholders, including, platforms, societies, and ultimately the planet. This expansion enriches service scholars' understanding of mechanisms, contexts, and boundary conditions. For instance, consideration of institutional mechanisms such as government policy related to privacy enriches our understanding of core service issues such as the trade-off between desiring frictionlessness and relinquishing control over one's data. Similarly, an understanding of the variability in telecommunication infrastructure worldwide provides the context needed to understand discrepancies in the uptake of online service delivery.

We call out the importance of engaged scholarship that measures impact in terms of how well we understand and solve societal issues, not just in terms of article citations and h-indices. Indeed, input from both scholars and practitioners demonstrates the importance of designing studies that are grounded in

critical societal issues and “lived phenomena.” Our article provides scholars with the language and tools needed to communicate with researchers in other disciplines (e.g., public policy and public health) and engage in interdisciplinary problem-centered research. As others have noted, “policy analysis starts with understanding the value creation process, specifically by exploring . . . an individual’s lived experience and the social context in which value is created” (Trischler and Charles 2019, 24). For example, our understanding of service ecosystem design might contribute to public health research related to vaccine distribution, and the notion of value co-creation might help in the design of livable cities.

Overall, the research priorities and topics outlined here necessitate big solutions and innovative thinking. Thus, this article raises vital implications for policy development and implementation. For instance, meeting the UN Sustainable Goals will require investment in sustainable infrastructure programs, and acting with a transformative services mindset will involve supporting social experiments to identify the drivers of community well-being. Similarly, the fair and equitable delivery of services through platforms will require the enactment of labor and privacy laws. We see the need for service scholars to engage with policymakers to help inform and drive these changes.

CONCLUSION

This article utilized the concepts of service ecosystems and transformative service research to elaborate upon three SRPs aimed at addressing important macro-level problems that will influence critical societal and environmental outcomes in the future. Incorporating input from scholars and practitioners from around the globe, we recognized a significant opportunity for the interdisciplinary field of service to help build the sustainable and just ecosystems that motivated these priorities. We hope that we have ignited the enthusiasm of our readers to continue the conversation. Now, let us move forward.

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Table 1: Service research priorities, sub-themes/topics, top stakeholder-wants, and research questions

Priority	Sub-themes/topics	Top Stakeholder-Wants	Questions
Large-Scale and Complex Service Ecosystems for Transformative Impact SRP5	Building resilient infrastructure and society	Agility, resilience, simplicity	<p>How can critical infrastructure processes and systems (e.g., data-centers, telecommunications, supply chains) be designed for resilience to climate change? What types of predictive models can be developed to anticipate these design requirements?</p> <p>How can we build infrastructure that is resilient to the large societal and environmental challenges we now face and will continue to experience in the future?</p> <p>How can core services (e.g., public services, health care service networks, schools, colleges) be mobilized to build societal resilience? What metrics can be used to measure and assess resilience?</p> <p>How can service processes be designed to address stakeholder uncertainty and its effects (e.g., by creating emotional connections) as a way to build personal resiliency during crises?</p> <p>How can researchers best partner with organizations already attempting to tackle these issues?</p>
	Sustainable consumption		<p>How can the efforts of participants in service ecosystems can be orchestrated to significantly reduce system-wide resource consumption?</p> <p>How can service systems be (re)designed to reduce pollution and exploitation of natural resources?</p> <p>How can technology be leveraged to enable sustainable consumption?</p> <p>How can the government and public sector policies and processes be designed and implemented to promote sustainable practices?</p> <p>How can the private sector and social entrepreneurs be encouraged or incentivized to invest in building sustainable and resilient service systems?</p> <p>Given that a small percentage of the world population consumes a very high proportion of the world's resources, what insights can service researchers bring to bear to create sustainable, if not more equitable, consumption of limited global resources?</p>
	Establishing efficient and effective public/government services		<p>How can governments manage the perception and ensure the reality of election integrity?</p> <p>How can technology enable the delivery of public services fairly and respectfully?</p> <p>What is the role of public services in building or, alternatively, reducing social cohesion?</p>

			<p>Under what circumstances are public-private service partnerships an appropriate organizational form during planned (e.g., space program) or unplanned (e.g., pandemic) large-scale initiatives?</p> <p>If appropriate, how can such public-private partnerships be structured and implemented to improve both process and outcome efficacy?</p>
	<p>Stakeholder-wants: resiliency, agility, and simplicity</p>		<p>(How) can large-scale and complex services be simplified and, therefore, have fewer potential failure points or at least seem simpler from the customer’s perspective?</p> <p>How can service ecosystems be built in agile ways to withstand or recover from unexpected crises?</p> <p>How can ecosystems develop agility?</p> <p>How should institutions be reshaped to allow agility to manifest within ecosystems?</p> <p>Can agility be developed without compromising social cohesion and stability?</p> <p>How can stakeholder creativity be harnessed to make service processes more agile?</p> <p>How can complex service systems be designed, managed, and communicated to key stakeholders to increase the simplicity of engaging with such systems?</p> <p>Can simplicity be “designed in”?</p> <p>Do agility and simplicity complement one another or does an increase in one necessitate a decrease in the other?</p>
<p>Platform Ecosystems and Marketplaces SRP6</p>	<p>Introduction</p>	<p>Trust, transformation</p>	<p>How can platform designers not only engender trust in the platform by acting as a “trusted intermediary” but also create a sense of shared purpose and trust among the platform participants?</p> <p>How are consumer behaviors transformed through the use of platforms and what are the implications for both platform-based and non-platform-based services?</p>
	<p>Exchange-based platforms</p>		<p>What are some ways in which customers can discern the potential quality of the promised service?</p> <p>How are signals sent by service providers without access to a corporate brand?</p> <p>How does the provider know they can trust the buyer with a potentially valuable asset (e.g., a home or money)?</p> <p>What roles do platforms perform in efficiently and accurately matching providers and customers?</p> <p>How do biases get created within these platforms and how can these be mitigated?</p>
	<p>Market-based platforms</p>		<p>How can firms compete with a major market platform that has the potential to form a monopoly?</p>

			<p>How do these platforms affect societies, customers, and employees?</p> <p>What leads customers to avoid patronizing these platforms?</p> <p>Will the emerging markets driven by platforms develop their own institutional norms, and if so, how?</p>
	Social media platforms		<p>How do users determine the boundaries between private and public information?</p> <p>What can be done to limit the information that can be shared or sold?</p> <p>How can social media be used to create opportunities for bridging socio-cultural divides as opposed to exacerbating them?</p> <p>How do users balance isolation from others with engagement only with similar others?</p> <p>Given that social media influencers often act on behalf of a company, who is responsible for the consequences of the influencer’s recommendations?</p> <p>How do influencers and early adopters in peer-to-peer marketing manage the structure and culture of the consumption group created on social media?</p>
	Ethical issues		<p>How much intrusion will we accept from platforms in terms of how personal information is used?</p> <p>Is there a limit in terms of the number of suppliers from which we would want to have customized offerings and how (or can) we choose these suppliers?</p> <p>Are we trading in autonomy for the convenience of matching?</p> <p>What are the implications of the lack of “employee” status for service providers, the commoditization of labor, and the discounting of long-term loyalty?</p>
Services for Disadvantaged Consumers and Communities SRP7	Addressing inequities in service provision and outcomes	Accessibility, dignity, fairness, and well-being	<p>How can we ensure that different population groups have equitable access to services?</p> <p>How can inequities in service provide and outcomes be reduced fairly?</p> <p>How can we develop new and update existing service systems to be inclusive and culturally responsive, considering the needs and interests not only of the dominant populations but also of those disadvantaged and marginalized?</p> <p>What is the role of trust among disadvantaged and marginalized stakeholders in the service ecosystem for accessing, combining, and reconfiguring resources for equitable provision and outcomes?</p> <p>What are some ways in which access can be improved through the implementation of affordable service technologies (e.g., digital tools to connect rural sellers with buyers without brokers or intermediaries and access to health care through handheld devices such as mobile apps)? On the other hand, how can technologies limit and undermine access?</p>

			<p>In a society that is struggling with issues of systemic racism and inequity, how can service technology be used to support and contribute to positive change instead of perpetuating or exacerbating existing inequity?</p>
	<p>Putting humans first</p>		<p>How can the impact on service outcomes of initiatives that integrate development metrics to optimize for more than financial goals be measured? How can these initiatives make a difference and have a positive impact on the well-being of individuals, communities, and society at large?</p> <p>While there are several initiatives related to responsible scholarship and practice currently underway (e.g., Fisk et. al. 2020), how do we raise even more awareness of what reasonably should be viewed as the unjust treatment of some groups in our society?</p> <p>How can services for disadvantaged consumers and communities be accessed in a manner that maintains human perceptions of dignity and fairness and reduces inequities?</p> <p>How can dignity and fairness be designed into service processes for all consumers and providers?</p>
	<p>Promoting financial well-being</p>		<p>What steps can be taken to enhance the financial well-being of vulnerable consumers and marginalized groups?</p> <p>How do changes in the structure of the economy (e.g., contract or gig workers) influence individuals' ability to be financially secure or influence the efficacy of programs designed to promote financial well-being?</p> <p>Do exploitative service practices (such as forced labor) limit the ability of consumers to experience financial well-being?</p> <p>Do government interventions (such as an increased minimum wage or stimulus payments) improve overall financial well-being?</p>

Figure 1: An organizing framework for service research priorities in turbulent times (Ostrom et al. 2021) and for designing sustainable service ecosystems (this article).

